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10/083,114	02/27/2002	Ichiro Okajima	220118US2	3393

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EXAMINER	
CHOUDHURY, AZIZUL Q	

ART UNIT	PAPER NUMBER
2145	

NOTIFICATION DATE	DELIVERY MODE
08/25/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/083,114	OKAJIMA ET AL.	
	Examiner	Art Unit	
	AZIZUL CHOUDHURY	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 April 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6-8,11,13,15-17,20-22,25,27,29 and 30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-8,11,13,15-17,20-22,25,27,29 and 30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 February 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

This office action is in response to the correspondence received on April 10, 2008.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-3, 6-8, 11, 13, 15-17, 20-22, 25, 27 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang, H.J. et al in view of Ashwood Smith (US Patent No: US 7,296,087 B1), hereafter referred to as Wang and Ashwood Smith, respectively.

1. With regards to claims 1 and 6, Wang teaches through Ashwood Smith, a link manager comprising: detecting means for detecting a link installation (p. 54, column 2, lines 31-35 and p. 55, Table 2 and p. 59, column 1, lines 14-18, Wang); managing means for defining a plurality of link metrics, each link metric being defined by a plurality of characteristics of each said link detected and managing data corresponding to said respective link metrics on a table (p. 54, column 2, lines 31-35 and p. 55, Table 2, Wang); link metric rank assigning means for assigning ranks to said respective link metrics, based on a predetermined preference (p. 55, column 2, lines 33-35, Wang); data rank assigning means for assigning ranks to each of said plurality of characteristics

defining each of said respective link metrics; and selecting means for selecting a link by analyzing each link based on each individual stored (constant and variable link) metric in order of rank, and selecting a link corresponding to a record having a characteristic with a highest rank thus assigned, at a link metric with a highest rank (p. 53, column 2, lines 42-45 and p. 55, column 2, lines 17-28 and p. 56, column 1, lines 28-37, Wang)

While Wang teaches determining link metrics (such as length of route and cost), ranking the metrics (through the use of weights), and shows that link metrics are represented by a various characteristics (note that Wang shows within Figure 2 how charge can be represented as free, flat or per time and how they can be ranked by preference). Wang however does not explicitly state that each link metric is represented by a plurality of characteristics. In the same field of endeavor, Ashwood Smith also teaches a link allocation design. Within Ashwood Smith's disclosure it is taught how a link metric can reflect not only geographic distance but also the provisioned bandwidth. Hence, Ashwood Smith teaches how a link metric can be represented by a plurality of characteristics (see column 1, lines 54-57, Ashwood Smith). Use of such details is beneficial in providing more accurate determinations when choosing the most efficient link/route. Therefore, it would have been obvious to one skilled in the art, during the time of the invention, to have combined the teachings of Wang with those of Ashwood Smith, to provide a technique for efficiently allocating resources of a shared network (see column 2, lines 18-21, Ashwood Smith).

2. With regards to claims 2 and 7, Wang teaches through Ashwood Smith, the link manager, wherein said managing means generates a record comprised of the data corresponding to said respective link metrics, for each link on said table (p. 54, column 2, lines 31-35 and p. 55, Table 2, Wang).

3. With regards to claims 3 and 8, Wang teaches through Ashwood Smith, the link manager, wherein said managing means generates a record corresponding to said new link and records data corresponding to link metrics of said link when a new link corresponding to neither said record is detected and said managing means deletes said record when a link corresponding to either said record becomes undetectable (p. 59, column 1, lines 14-18 and p. 58, column 2, lines 3-4 and p. 59, column 1, lines 28-29, Wang).

4. With regards to claim 11, Wang teaches through Ashwood Smith, a computer program of the product including a computer storage medium with a computer program code mechanism stored therein which when executed by a computer causes the computer to perform a method of link management comprising: detecting a link installation (p. 54, column 2, lines 31-35 and p. 55, Table 2 and p. 59, column 1, lines 14-18, Wang); defining a plurality of link metrics, each link metric being defined by a plurality of characteristics of each said link detected and managing data corresponding to said respective link metrics on a table (p. 54, column 2, lines 31-35 and p. 55, Table 2, Wang); generating a record comprised of the data corresponding to said respective

link metrics, for each link on said table (p. 54, column 2, lines 31-35 and p. 55, Table 2, Wang); assigning ranks to said respective link metrics, based on a predetermined preference (p. 55, column 2, lines 33-35, Wang); assigning ranks to each of said plurality of characteristics defining said respective link metrics; when said predetermined preference is given, analyzing each link based on each individual metric in the ranking order of the respective metrics and selecting a link corresponding to a record having a characteristic with a highest rank thus assigned, at a link metric with a highest rank (p. 55, column 2, lines 17-28 and p. 56, column 1, lines 28-37, Wang)

While Wang teaches determining link metrics (such as length of route and cost), ranking the metrics (through the use of weights), and shows that link metrics are represented by a various characteristics (note that Wang shows within Figure 2 how charge can be represented as free, flat or per time and how they can be ranked by preference). Wang however does not explicitly state that each link metric is represented by a plurality of characteristics. In the same field of endeavor, Ashwood Smith also teaches a link allocation design. Within Ashwood Smith's disclosure it is taught how a link metric can reflect not only geographic distance but also the provisioned bandwidth. Hence, Ashwood Smith teaches how a link metric can be represented by a plurality of characteristics (see column 1, lines 54-57, Ashwood Smith). Use of such details is beneficial in providing more accurate determinations when choosing the most efficient link/route. Therefore, it would have been obvious to one skilled in the art, during the time of the invention, to have combined the teachings of

Wang with those of Ashwood Smith, to provide a technique for efficiently allocating resources of a shared network (see column 2, lines 18-21, Ashwood Smith).

5. With regards to claims 13, 17, 22 and 27, Wang teaches through Ashwood Smith, the computer program product, further comprising: generating a record corresponding to a new link and recording data corresponding to link metrics of said link when a new link corresponding to neither said record is detected; and deleting said record when a link corresponding to either said record becomes undetectable (p. 59, column 1, lines 14-18 and p. 58, column 2, lines 3-4 and p. 59, column 1, lines 28-29 and p. 58, column 1, lines 1-14, Wang).

6. With regards to claim 15, Wang teaches through Ashwood Smith, a link manager comprising: detecting means for detecting a link installation (p. 54, column 2, lines 31-35 and p. 55, Table 2 and p. 59, column 1, lines 14-18); managing means for defining a plurality of constant link metrics and variable link metrics (p. 56, column 1, lines 38-49), each constant and variable link metric being defined by a plurality of characteristics of each said link detected and managing data corresponding to said respective link metrics on a table, said managing means monitoring the variable link metrics which vary over time (p. 54, column 2, lines 31-35 and p. 55, Table 2); link metric rank assigning means for assigning ranks to said constant and variable link metrics, and assigning ranks to each of said plurality of characteristics defining each of said constant and variable link metrics; and selecting means for selecting a link by analyzing each link based on each

individual stored constant and variable link metric in order of rank, and selecting a link corresponding to a record having a characteristic with a highest rank thus assigned, at a constant or variable link metric with a highest rank (p. 55, column 2, lines 17-28 and p. 56, column 1, lines 28-37)

While Wang teaches determining link metrics (such as length of route and cost), ranking the metrics (through the use of weights), and shows that link metrics are represented by a various characteristics (note that Wang shows within Figure 2 how charge can be represented as free, flat or per time and how they can be ranked by preference). Wang however does not explicitly state that each link metric is represented by a plurality of characteristics. In the same field of endeavor, Ashwood Smith also teaches a link allocation design. Within Ashwood Smith's disclosure it is taught how a link metric can reflect not only geographic distance but also the provisioned bandwidth. Hence, Ashwood Smith teaches how a link metric can be represented by a plurality of characteristics (see column 1, lines 54-57, Ashwood Smith). Use of such details is beneficial in providing more accurate determinations when choosing the most efficient link/route. Therefore, it would have been obvious to one skilled in the art, during the time of the invention, to have combined the teachings of Wang with those of Ashwood Smith, to provide a technique for efficiently allocating resources of a shared network (see column 2, lines 18-21, Ashwood Smith).

7. With regards to claims 16 and 21, Wang teaches through Ashwood Smith, the link manager, wherein said managing means generates a record comprised of the data

corresponding to said respective constant and variable link metrics, for each link on said table (p. 54, column 2, lines 31-35 and p. 55, Table 2, Wang).

8. With regards to claim 20, Wang teaches through Ashwood Smith, a link management method comprising: detecting a link installation (p. 54, column 2, lines 31-35 and p. 55, Table 2 and p. 59, column 1, lines 14-18, Wang); defining a plurality of constant link metrics and variable link metrics (p. 56, column 1, lines 38-49, Wang), each constant and variable link metric being defined by a plurality of characteristics of each said link detected and managing data corresponding to said respective link metrics on a table (p. 54, column 2, lines 31-35 and p. 55, Table 2, Wang); assigning ranks to said constant and variable link metrics; assigning ranks to each of said plurality of characteristics defining each of said constant and variable link metrics; and a selecting step of selecting a link by analyzing each link based on each individual stored constant and variable metric in order of rank, and selecting a link corresponding to a record having a characteristic with a highest rank thus assigned, at a constant or variable link metric with a highest rank (p. 55, column 2, lines 17-28 and p. 56, column 1, lines 28-37, Wang)

While Wang teaches determining link metrics (such as length of route and cost), ranking the metrics (through the use of weights), and shows that link metrics are represented by a various characteristics (note that Wang shows within Figure 2 how charge can be represented as free, flat or per time and how they can be ranked by preference). Wang however does not explicitly state that each link metric is

represented by a plurality of characteristics. In the same field of endeavor, Ashwood Smith also teaches a link allocation design. Within Ashwood Smith's disclosure it is taught how a link metric can reflect not only geographic distance but also the provisioned bandwidth. Hence, Ashwood Smith teaches how a link metric can be represented by a plurality of characteristics (see column 1, lines 54-57, Ashwood Smith). Use of such details is beneficial in providing more accurate determinations when choosing the most efficient link/route. Therefore, it would have been obvious to one skilled in the art, during the time of the invention, to have combined the teachings of Wang with those of Ashwood Smith, to provide a technique for efficiently allocating resources of a shared network (see column 2, lines 18-21, Ashwood Smith).

9. With regards to claim 25, Wang teaches through Ashwood Smith, the computer program product including a computer storage medium with a computer program code mechanism stored therein, which when executed by a computer causes the computer to perform a method of link management, comprising: detecting a link installation (p. 54, column 2, lines 31-35 and p. 55, Table 2 and p. 59, column 1, lines 14-18, Wang); defining a plurality of constant link metric and variable link metrics (p. 56, column 1, lines 38-49, Wang), each constant and variable link metric being defined by a plurality of characteristics of each said link detected and managing data corresponding to said respective link metrics on a table (p. 54, column 2, lines 31-35 and p. 55, Table 2, Wang); generating a record comprised of the data corresponding to said respective constant and variable link metrics, for each link on said table; assigning ranks to said

respective link metrics, based on a predetermined preference; assigning ranks to each of the plurality of characteristics corresponding to said respective constant and variable link metrics; and analyzing each link based on each individual metric in the ranking order of the respective constant and variable metrics and selecting a link corresponding to a record having a characteristic with a highest rank thus assigned, at a constant or variable link metric with a highest rank (p. 55, column 2, lines 17-28 and p. 56, column 1, lines 28-37, Wang)

While Wang teaches determining link metrics (such as length of route and cost), ranking the metrics (through the use of weights), and shows that link metrics are represented by a various characteristics (note that Wang shows within Figure 2 how charge can be represented as free, flat or per time and how they can be ranked by preference). Wang however does not explicitly state that each link metric is represented by a plurality of characteristics. In the same field of endeavor, Ashwood Smith also teaches a link allocation design. Within Ashwood Smith's disclosure it is taught how a link metric can reflect not only geographic distance but also the provisioned bandwidth. Hence, Ashwood Smith teaches how a link metric can be represented by a plurality of characteristics (see column 1, lines 54-57, Ashwood Smith). Use of such details is beneficial in providing more accurate determinations when choosing the most efficient link/route. Therefore, it would have been obvious to one skilled in the art, during the time of the invention, to have combined the teachings of Wang with those of Ashwood Smith, to provide a technique for efficiently allocating resources of a shared network (see column 2, lines 18-21, Ashwood Smith).

10. With regards to claim 29, Wang teaches through Ashwood Smith, a link manager comprising: a detector configured to detect a link installation (p. 54, column 2, lines 31-35 and p. 55, Table 2 and p. 59, column 1, lines 14-18, Wang); a processor configured to define a plurality of constant link metrics and variable link metrics (p. 56, column 1, lines 38-49, Wang), each constant and variable link metric being defined by a plurality of characteristics of each said link detected and managing data corresponding to said respective link metrics on a table (p. 54, column 2, lines 31-35 and p. 55, Table 2, Wang); a processor configured to assign ranks to said constant and variable link metrics, and assigning ranks to each of said plurality of characteristics defining each of said constant and variable link metrics; and a processor configured to select a link by analyzing each link based on each individual stored constant and variable link metric in order of rank, and selecting a link corresponding to a record having a characteristic with a highest rank thus assigned, at a constant or variable link metric with a highest rank (p. 55, column 2, lines 17-28 and p. 56, column 1, lines 28-37, Wang)

While Wang teaches determining link metrics (such as length of route and cost), ranking the metrics (through the use of weights), and shows that link metrics are represented by a various characteristics (note that Wang shows within Figure 2 how charge can be represented as free, flat or per time and how they can be ranked by preference). Wang however does not explicitly state that each link metric is represented by a plurality of characteristics. In the same field of endeavor, Ashwood Smith also teaches a link allocation design. Within Ashwood Smith's disclosure it is

taught how a link metric can reflect not only geographic distance but also the provisioned bandwidth. Hence, Ashwood Smith teaches how a link metric can be represented by a plurality of characteristics (see column 1, lines 54-57, Ashwood Smith). Use of such details is beneficial in providing more accurate determinations when choosing the most efficient link/route. Therefore, it would have been obvious to one skilled in the art, during the time of the invention, to have combined the teachings of Wang with those of Ashwood Smith, to provide a technique for efficiently allocating resources of a shared network (see column 2, lines 18-21, Ashwood Smith).

11. With regards to claim 30, Wang teach through Ashwood Smith, a link manager comprising: a detector configured to detect a link installation (p. 54, column 2, lines 31-35 and p. 55, Table 2, and p. 59, column 1, lines 14-18, Wang); a processor configured to define a plurality of link metrics, each link metric being defined by a plurality of characteristics of each detected link (p. 54, column 2, lines 31-35 and p. 55, Table 2, Wang); an interface configured to receive an input to rank said respective link metrics and receive an input to rank each of said plurality of characteristics defining each of said respective link metrics (p. 55, column 2, lines 33-35, Wang); and a processor configured to select a link by analyzing each link based on each individual stored metric in order of rank and select a link corresponding to a record having a characteristic with a highest rank thus assigned, at a link metric with a highest rank (p. 53, column 2, lines 42-45 and p. 55, column 2, lines 17-28 and p. 56, column 1, lines 28-37, Wang).

While Wang teaches determining link metrics (such as length of route and cost), ranking the metrics (through the use of weights), and shows that link metrics are represented by a various characteristics (note that Wang shows within Figure 2 how charge can be represented as free, flat or per time and how they can be ranked by preference). Wang however does not explicitly state that each link metric is represented by a plurality of characteristics. In the same field of endeavor, Ashwood Smith also teaches a link allocation design. Within Ashwood Smith's disclosure it is taught how a link metric can reflect not only geographic distance but also the provisioned bandwidth. Hence, Ashwood Smith teaches how a link metric can be represented by a plurality of characteristics (see column 1, lines 54-57, Ashwood Smith). Use of such details is beneficial in providing more accurate determinations when choosing the most efficient link/route. Therefore, it would have been obvious to one skilled in the art, during the time of the invention, to have combined the teachings of Wang with those of Ashwood Smith, to provide a technique for efficiently allocating resources of a shared network (see column 2, lines 18-21, Ashwood Smith).

12. The obviousness motivation applied to claims 1, 6, 11, 15, 20, 25, and 29-30 are applicable to their respective dependent claims.

Response to Arguments

Applicant's arguments with respect to claims 1-3, 6-8, 11, 13, 15-17, 20-22, 25, 27 and 29-30 have been considered but are moot in view of the new ground(s) of

rejection. The claims have been amended to reflect that the claimed invention's link metrics are represented by a plurality of characteristics. While Wang teaches determining link metrics (such as length of route and cost), ranking the metrics (through the use of weights), and shows that link metrics are represented by a various characteristics (note that Wang shows within Figure 2 how charge can be represented as free, flat or per time and how they can be ranked by preference). Wang however does not explicitly state that each link metric is represented by a plurality of characteristics. In the same field of endeavor, Ashwood Smith also teaches a link allocation design. Within Ashwood Smith's disclosure it is taught how a link metric can reflect not only geographic distance but also the provisioned bandwidth. Hence, Ashwood Smith teaches how a link metric can be represented by a plurality of characteristics (see column 1, lines 54-57, Ashwood Smith).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AZIZUL CHOUDHURY whose telephone number is (571)272-3909. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patrice Winder/
Primary Examiner, Art Unit 2145

/A. C./
Examiner, Art Unit 2145